THE COLEOPTERA OF CANADA.

BY H. F. WICKHAM, IOWA CITY, IOWA.

XXV. THE CERAMBYCIDÆ OF ONTARIO AND QUEBEC.—*(Continued.)*

ATIMIA, Hald.

Represented by *A. confusa*, Say, the only Canadian species of the group Atimioides. Aside from the structural peculiarities given in the table of genera, it may be characterized by the blackish colour and the punctate surface clothed with rather long yellowish pubescence, which is irregularly disposed so as to leave abraded smooth spots. The elytra are broader than prothorax, truncate at tip. Length, .33–.40 inch.

NECYDALIS, Linn.

This genus, by the short elytra, bears some resemblance to *Molorchus*. The third and fourth antennal joints together are distinctly longer than the fifth. Our species is *N. mellitus*, Say, unknown to me, but described by Mr. Leng as being of variable colour, "usually rufo-testaceous, head, antennæ (base and tip tinged with rufous), thorax, scutellum and abdomen above black ; elytra punctate, more coarsely toward the margin ; reddish-brown, with paler spot at tip or entirely rufo-testaceous." The elytra are marked by an oblique impression which is not deep and does not reach the tip. Length, .60–.84 inch.

DESMOCERUS, Serv.

D. palliatus, Forst., is found on the elder *(Sambucus)* in July. It is a very showy beetle, with narrow head, deeply impressed above, bell-shaped prothorax, and faintly costate elytra. Colour blue except the base of the elytra, which is broadly orange or yellow. Length, .70–.90 inch. This insect can be mistaken for no other Longhorn.

TOXOTUS, Serv.

"This genus is sharply defined by the spurs of the hind tibiæ, which are inserted at the base of a deep excavation instead of at the extreme end."—(Leng.) This character is of easy verification, and is in itself sufficient for the separation of *Toxotus* from other Lepturoides. A modification of Mr. Leng's table may be used for the Canadian forms.

A. Elytra striped, black with marginal and discal yellowish vitta. .60–.68 in . . . . *trivittatus*, Say.

AA. Elytra unicolorous or nearly so.

b. Third joint of antennæ much longer than the fourth.
Larger species, legs bicoloured. .76–1.00 in. . *Schaumii*, Lec.
Smaller species, legs unicolored. .40–.60 in. . *vestitus*, Hald.
bb. Third joint of antennæ but slightly longer than the fourth.
Tips of elytra obliquely truncate, sub-bidentate. .87–.90 in. . . . . *cylindricollis*, Say.

The name *trivittatus* replaces that of *vittiger* in accordance with the synonymy proposed by Mr. Leng.

RHAGIUM, Fabr.

R. lineatum, Oliv., is often common under pine bark or in lumber piles. It has scarcely the appearance of being a Longhorn at all, the antennæ being so short as to usually fail of attaining the base of the elytra. The prothorax is much narrower than the elytra, armed on each side with a strong spine or acute tubercle. The elytra are narrowed behind, sharply costate. In colour the insect is black or nearly so, the prothorax appearing gray from the pubescence which clothes it, excepting a smooth stripe on each side (including the spine) and one on the median line. The elytra are marked by a few reddish or yellowish spots, and the pubescence is irregular, giving a mottled appearance. Length, .54–.80 inch. My small specimens are from the Lake Superior region, while the large ones came from the forests of the mountains of Arizona.

CENTRODERA, Lec.

A large species, *decolorata*, Harr. (Fig. 26), is our only representative. The head, prothorax, under surface and appendages are reddish-brown, the elytra lighter. The eyes are more prominent than usual, the prothorax shining, nearly smooth at middle, closely punctate and somewhat opaque at sides, lateral tubercle large and acute. Elytral punctuation coarse at base, becoming finer to tip, sides nearly parallel. Mr. Leng describes the antennæ as "about as long as the body," but they may fall one-third or more shorter. Length, 1.20 to 1.25 inch. Rather rare. Found on beech by Mr. Harrington.

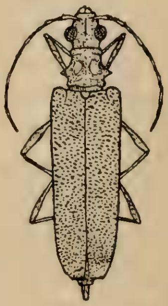
FIG. 26.

PACHYTA, Serv.

A. Elytra reticulate with raised smooth lines, the intermediate spaces coarsely punctured. Black, subæneous, antennæ, femora and base of tibiæ ferruginous. .51–.64 in. . . . . *rugipennis*, Newm.

AA. Elytra simply punctured.

Punctuation finer, surface of elytra finely pubescent, opaque or nearly so. Black, legs and antennæ often reddish, elytra yellow, four spots on each and tip black. .35–.38 in. *monticola*, Rand.

Punctuation coarse, surface of elytra glabrous, shining, colour black, elytra sometimes testaceous, or more or less distinctly maculate with black. .60–.72 in............*liturata*, Kirby.

I am unacquainted with *P. rugipennis*, and the description is taken from Mr. Leng's synopsis. *P. monticola* is to be found on blossoms of wild rose, while I have taken *liturata* in numbers on piles of sawed pine lumber.

ANTHOPHILAX, Lec.

Three Canadian species are recorded, only one of which, *A. attenuatus*, Hald., is known to me. The others, *A. viridis*, Lec., and *A. malachitus*, Hald., are suspected by Dr. Horn to be respectively the ♀ and ♂ of one species. Following his table they separate thus: all belonging to that section of the genus in which the antennæ are slender, the third joint much longer than the fourth.

" Elytra coarsely punctate scabrous, more or less metallic.

Elytra greenish-blue, legs black. .70 in.............*viridis*, ♀.

Elytra cupreo-æneous to blue, legs pale. .52 in....*malachitus*, ♂.

Elytra testaceous, irregularly maculate with piceous spots. Surface coarsely sparsely punctate and with small spaces which are distinctly pubescent; median line of thorax distinctly impressed. .56 in....................................*attenuatus*."

Mr. W. H. Harrington has taken the last mentioned insect at Ottawa on beech.

ACMÆOPS, Lec.

Only two species, *pratensis* and *proteus*, are recorded in the Society's lists and additions. I have, however, seen *bivittata* with the label "Quebec," and recently Mr. Chagnon sent a specimen of *subpilosa* as coming from Montreal; *longicornis* is known from the far north of Canada, and is included in the subjoined table, which is in the main equivalent to those prepared by Dr. Leconte and Mr. Leng.

A. Front and mouth much prolonged, body moderately robust, prothorax bell-shaped, sides sinuate but not tuberculate. Black, elytra variable, either blackish, reddish or clouded, occasionally indistinctly vittate. .24–.34 in...............*pratensis*, Laich.

AA. Front not greatly prolonged.

b. Body short and stout, antennæ thicker, hind tarsi stout, the joints 1–3 equally pubescent beneath. Prothoracic tubercle distinct, elytra closely punctured. Colour varying from entirely black to almost entirely testaceous ; or the thorax may be yellowish while the elytra are black. Typical form has yellowish elytra, each with two black stripes. .24–.36 in..*bivittata*, Say.

bb. Body more slender, antennæ more delicate, hind tarsi slender, pubescence wholly or in part lacking beneath on second and sometimes on first joint.

c. Disk of prothorax convex, slightly channeled, densely punctured.

Prothorax longer than wide, elytra rather sparsely punctured, pubescence short and scant. Colour extremely variable, black to testaceous, elytra often vittate. .36–.44 in..............*longicornis*, Kby.

Prothorax broader than long ; blackish, pubescence very long. .36–.44 in............ .. *subpilosa*, Lec.

cc. Disk of prothorax flattened behind and prolonged into two dorso-lateral tubercles. Colour variable, blackish to testaceous, legs variable, but apparently with the base of the femora at least always rufous. .24–.36 in......................... *proteus*, Kirby.

While definite information is lacking, it is probable that *A. proteus* and *A. pratensis* breed in pine, since they are so frequently found on piles of pine lumber. *A. bivittata* (Fig. 27) is to be collected on flowers of *Anemone pennsylvanica*. Mr. Leng calls the punctuation "sparse," but it is rather close and coarse.

GAUROTES, Lec.

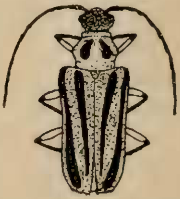

FIG. 27.

G. cyanipennis, Say, is readily known by its brilliant colour. The body is black, shining often with a purplish tinge, the elytra bright green, polished, the antennæ, legs and mouth-parts yellowish. The head is distinctly but sparsely punctured, the prothorax almost smooth except at sides, the elytral punctuation very distinct but widely separated. Length, .36–.40 in. In Wisconsin I found this insect almost confined to Sumac blossoms. It is said to have been found ovipositing on butternut.

Encyclops, Newm.

E. cæruleus, Say, belongs here. It is smaller than most of the Lepturoides, and of slender parallel form, the elytra scarcely tapering to tip. The head is broad, squarish, the constriction far behind the eyes. Lateral thoracic tubercle distinct. Colour usually blue, varying to greenish, legs testaceous, antennæ with the bases of the joints (especially the distal ones) more or less testaceous. Punctuation strong, rugose. .28–.32. inch.

FOOD PLANTS OF THE SAN JOSE SCALE (ASPIDIOTUS PERNICIOSUS) IN OHIO, EXCLUSIVE OF FRUIT TREES.

BY F. M. WEBSTER, WOOSTER, OHIO.

The following list includes forest and ornamental trees and shrubs, upon which the San José scale has been found breeding in Ohio*. Nearly all of these have been found either by myself or my assistant, Mr. C. W. Mally, in sufficient numbers to indicate that the insect might thrive on any of them. The Cotoneaster was sent for inspection, it having been recently received from a Long Island nursery firm, and when received was literally covered with the scale :

Grape, *Vitis labrusca.*
Linden, *Tilia Americana.*
European Linden, *Tilia Europæa.*
Sumac, *Rhus glabra.*
Japan Quince, *Pyrus japonica.*
Cotoneaster, *C. frigidum.*
Flowering Peach, *Prunus*, sp.
Flowering Cherry, *Prunus*, sp.
American Elm, *Ulmus Americana.*
Black Walnut, *Juglans nigra.*
Willow (imported), *Salix verminalis.*
Cut-leafed Birch, *Betula*, sp.
Lombardy Poplar, *Populus dilatata.*
Carolina Poplar, *P. monilifera.*
Golden-leaf Poplar, *P. Van Geerti.*
Catalpa, *C. speciosa.*
Chestnut, *Castanea sativa.*
Osage Orange, *Maclura aurantiaca.*
Snowball, *Viburnum opulus.*

To these must be added the several varieties of roses, currants, gooseberries and raspberries. The Early Richmond cherry I believe to be exempt from attack, as I have found trees whose branches interlocked with those of a pear that had been killed by the scale, yet the cherry was uninfested ; and in two cases that came under my observation, where this variety of cherry had been grafted upon mahaleb stock, and shoots had sprung up from below the graft, the shoots were badly infested with scale, while none at all could be found on the trees themselves.

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*The determinations have been kindly verified by Dr. L. O. Howard, of the Division of Entomology, Department of Agriculture, Washington, and his assistants.